

Department Lecture Series
Fall 2001 - Winter 2004

Winter 2004		
Speaker	Institution	Title
Linda Abriola	Tufts University	Remediation of Sites Contaminated by Organic Solvents
		What can we hope to achieve and is it worth the investment?
Doug Burbank	UCSB	Building collisional orogens: interactions of climate, erosion, and tectonics
Philippe Tortell	University of British Columbia, Vancouver	Real-time measurement of oceanic trace gas concentrations using membrane inlet mass spectrometry.
David Hilton	University of California, San Diego	Volatile Mass Balance and Recycling at Subduction Zones
Paul Sereno	Chicago	CASE Lecture
Craig Lundstrom	University of Illinois Urbana-Champaign	The rates and processes of crustal level magma differentiation at Volcan Arenal, Costa Rica
Miaki Ishii	Scripps	Inner Core Anisotropy and the Inner-Most Inner Core
Rob DeConto	University of Massachusetts	Paleogene cooling and the early glacial history of Antarctica
Spring Break		
Peter Sadler	University of California At Riverside	Dorr Lecture: Stratigraphic Correlation as a Traveling Salesman Problem
Christina de la Rocha	University of Cambridge	Tracing the Silica Cycle Using Silicon Isotopes
Ken Farley	Caltech	A possible new technique for detailed rock cooling histories from He in apatite
Mark Zoback	Stanford University	Friction, pore pressure and strength of the crust
Michael Hochella	Virginia Tech	There's Plenty of Room at the Bottom: Having Fun with Nanogeoscience and the Mineral-Microbe World
Michael Foote	University of Chicago	Origination and extinction in the history of life
Charles Langmuir	Harvard University	A new composition of the upper mantle and its implications for the origin of mantle heterogeneity

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Speaker	Institution	Title
Joel Blum	University of Michigan	Introduction to the Semester
Maria Zuber	Massachusetts Institute of Technology	Geophysical Observations of Seasonal Change on Mars
Richelle Allen-King	Washington State University	Darcy Lecture: A Hydrogeochemist's Perspective on Organic Contaminant Transport in Groundwater
Jean Bahr	University of Wisconsin-Madison	Birdsall-Dreiss Lecture: Groundwater as an Ecosystem Resource
Mark Altabet	University of Massachusetts at Dartmouth	Close Coupling Between Global Climate and Oceanic Nitrogen Biogeochemistry
Jean Lynch-Stieglitz	Lamont Doherty Earth Observatory	The Atlantic Overturning Circulation: A 30,000 Year Perspective
Bob Newton	Lamont Doherty Earth Observatory	Isotope Tracers in the Arctic Ocean: What are they telling us about the climate system?

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Ryosuke Motani	University of Oregon	Evolution and Paleobiology of Fish-Shaped Reptiles of the Age of Dinosaurs (Ichthyosauria)--Quantitative Approaches.
Bill Dietrich	University of California Berkeley	The Notion of Geomorphic Transport Laws: Key to Modeling the Linkages Among Tectonics, Climate and Landscape Evolution
Ghislain de Marsily	University Pierre et Marie Curie-Paris VI	Submarine freshwater springs : a significant source of water for the future ? Some examples in the Mediterranean sea.
Laurie Leshin	Arizona State University	Carbon on Mars: Reservoirs, Processes, and Implications for Biosignatures
Steven Lower	Ohio State University	Nanoscale Forces and Structures at the Bacterium-Mineral Interface
Satish Myneni	Princeton University	Organohalogenes in the Environment: Is Nature Making Them?

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Simon Kelley	The Open University	Dating Terrestrial Meteorite Impacts, Is There Any Relationship with Stratigraphic Boundaries?
Deborah Thomas	UNC-Chapel Hill	Neodymium isotopic reconstruction of early Paleogene thermohaline circulation
Peter Schlosser	Columbia University and LDEO	Visualization and quantification of transport in the aquatic environment by means of natural and anthropogenic trace substances
Alex Forte	University of Western Ontario	Thermochemical Upper-Mantle Heterogeneity Below North America From Tomography-Based Mantle Flow Models
Birger Schmitz	University of Sweden	Early Paleogene climates and events
Mark Brandon	Yale University	Using plant fossils to estimate latitudinal offset of the far-travelled Baja BC terrane
Neil Shubin	University of Chicago	Dawn of the Age of Salamanders in Northeast China
Delphine Patriarche	University of Michigan	Analysis of transport mechanisms in argillites in Tournemire (France): implications on safety of nuclear waste disposals
Paul Tapponnier	IPG-Paris	The growth of the Tibet Plateau and the rheology of Continents
Richard Alley	Penn State University	Abrupt Climate Change: Signal, noise, and climate surprises
Abby Kavner	UCLA	Electrochemistry and the Earth's Core-Mantle Boundary
Ian Carmichael	UCB	Experiments, thermodynamics and the evolution of magmas
Dianne Newman	Caltech	Microbe/Mineral Interactions: Gaining Insights into the Past through Molecular Microbiology

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Kazuhiro Toyoda	Hokkaido University	Microbial Geochemistry - Oxidation Kinetics of Manganese (II) by Spore Coats of SG-1
Chris Hall	University of Michigan	Seeing beacon of light on an ocean of argon: The development of modern argon geochronology from an insider's perspective
Brian Kennedy	University of Michigan	Geochemical records and their use in aquatic ecology
Jeff Gee	Scripps Institution of Oceanography	Geomagnetic Intensity Records from the Oceanic Crust
Matthew Carrano	Stony Brook	Large-scale patterns in dinosaur evolution
Bonnie Jacobs	SMU	Leaves, and How They Measure Up as Representatives of Tertiary Climate in Tropical East Africa: Examples from Tanzania and Kenya
David Evans	Yale	The Non-Uniformitarian Menu of late Precambrian Geodynamics and Global Climate
Thorne Lay	UCSC	Complex Structures in the Core-Mantle Boundary Layer
Paul Silver	Carnegie Institution	Which Way Does the Mantle Wind Blow? Measuring the Mantle Flow Field Beneath Western North America
Kelin Whipple	MIT	Does Erosion Drive Uplift? Bedrock Channels, Landscape Relief, and Critical Wedge Tectonics.
Bob Poreda	University of Rochester	Extra-Terrestrial Bucky Balls at the Permo-Triassic Boundary: Impacts, Mass Extinctions and the origin of the atmosphere
Gary Sposito	University of California Berkeley	Distinguished Weber Lecture: Three Memos for the Millennium
Catherine Johnson	Scripps Institution of Oceanography	Planetary Lithospheres: Key records of the thermal and tectonic evolution of terrestrial planets

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Dr. Frank Richter	University of Chicago	Early History of the Solar System as seen by Ca-Al-rich Inclusions in Meteorites
Dr. Gerry Dickens	Rice University	Extreme climates, frozen methane and subsurface microbes: Reconstructing the global carbon cycle with Vast deposits of gas hydrate
Dr. Kathy Cashman	University of Oregon	How lava flows: The rheology and emplacement dynamics of Hawaiian basaltic lava flows
Dr. Karen Fischer	Brown University	Sesimological constraints on subduction zone process
Dr. Terry Plank	Boston University	Recycling through the subduction factory

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Dr. Berry Lyons	Ohio State University	The Biogeochemistry of Antarctic Closed-Basin Lakes: The influence of climate
Dr. Aline Cotel	University of Michigan	From Volcanic eruptions to oceanic turbidity currents: A physical approach to transport across stratified interfaces.
Dr. Grant Garven	Johns Hopkins University	Hydrogeologic Modeling of Fluid Flow, Faults, and Sediment-Hosted Ores at Red Dog, Alaska
Dr. Ed Garnero	Arizona State University	Revealing Earth's Dynamic Deep Interior
Scott Wing	Smithsonian Institution	Case Memorial Lecture
Dr. Brian McPherson	New Mexico Tech	Studies of Diagenesis and Its Effect on Regional Scale Permeability and Hydrodynamics
Dr. Basil Tikoff	University of Wisconsin	Coupling of crustal and mantle deformation: A geological perspective

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Name	Institution	Title
Joel Blum	University of Michigan	Departmental Meeting
Jerry Mitrovica	University of Toronto	Taking the fingerprints of global sea-level change
Jan Amend	Washington University	Geochemical Controls on Microbial Metabolism in Hydrothermal Ecosystems
Patrizia Fumagalli	University of Michigan	Fluid Fluxes in Subduction Zones: Desperately Seeking Hydrogen
Raymond Jeanloz	University of California	From Earth to Stars: High-Pressure Studies of Planetary Interiors
Hope Jahren	Johns Hopkins University	The Stable Isotope Relationship between Carbon in Land Plants and Carbon in the Atmosphere: Applications in Deep Time
Clark Burchfiel	MIT	Evolution of the Tibetan plateau viewed from an Eastern Tibetan perspective
David Jablonski	University of Chicago	The evolutionary role of Mass Extinction: Disaster, Recovery, and Something-in-between
Jake Lowenstern	USGS	Uncovering the buried secrets of an active volcano: Medicine Lake, California
Steve Ingebritsen	USGS	Land Subsidence in the United States
Dave Montgomery	University of Washington	Climate, tectonics, and geomorphology
Francis Albarede	Ecole Normale Supérieure-Lyon	From Terrestrial Accretion to the Modern Mantle: the Memories of Mantle Convection
Ed Evenson	Lehigh University	Glaciohydraulic Supercooling, Underplating, and the Formation of Debris Laden Basal Ice - Why does it happen and Why is it important ?
Ronald Amundson	University of California	The Nitrogen Isotope Composition of Soils and Ecosystems